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Dr. Ben F. Lemert is an instructor in economics and geography in Duke University. His undergraduate work was done at Ohio State University where he taught three years, and his graduate work at Columbia University where he taught in 1930. He has traveled extensively in the United States, Canada, Mexico, South America, Europe and northern Africa. His article "Uruguay and the Uruguayans" appeared in November, 1934.

Mrs. Lemert did her undergraduate study at Ohio University and has traveled with her husband, building up an extensive collection of notes as they passed from one field study to another. Dr. and Mrs. Lemert spent most of the past summer (their second) in Mexico.

This is the first in a series of articles on Mexico which were planned in advance of the field work and prepared exclusively for the JOURNAL. They have been written to convey a limited picture of local features, at selected places, as an aid to the teacher and student. The series is not intended to convey a complete picture of Mexico, its life, or industries.

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Dr. Hudson is Chief, Geography Section, Division of Land Planning and Housing, Tennessee Valley Authority. His staff now consists of fourteen geographers and eight assistants. The work of the Geography Section is of a research nature dealing with problems of land use. Stated briefly, it is concerned with the application of geographic science to the practical problems of the region.

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Dr. Botts is a professor of geography in the State Normal School, Cortland, New York. His paper entitled "Northbridge, Massachusetts, A Town that Moved Down Hill" appeared in October, 1934.

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Dr. Roucek is a native of Czechoslovakia and the author of "The Problem of Minorities and the League of Nations," and "Contemporary Rumania and Her Problems." Formerly a member of the Extension Division of Pennsylvania State College, he is now on the staff of the Division of General Education of New York University.

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Dr. Cressey is chairman of the department of geology and geography, Syracuse University. He has spent many years in the Orient, and returned for further field study in 1934, under the National Research Council of Washington, and the Agricultural Research Bureau of Nanking. Dr. Cressey is author of the well known volume, "China's Geographic Foundations."

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VOLUME XXXIV OCTOBER, 1935 NUMBER 7

THE UNITED STATES AND MEXICO

BEN F. LEMERT AND ROSE V. LEMERT
Duke University

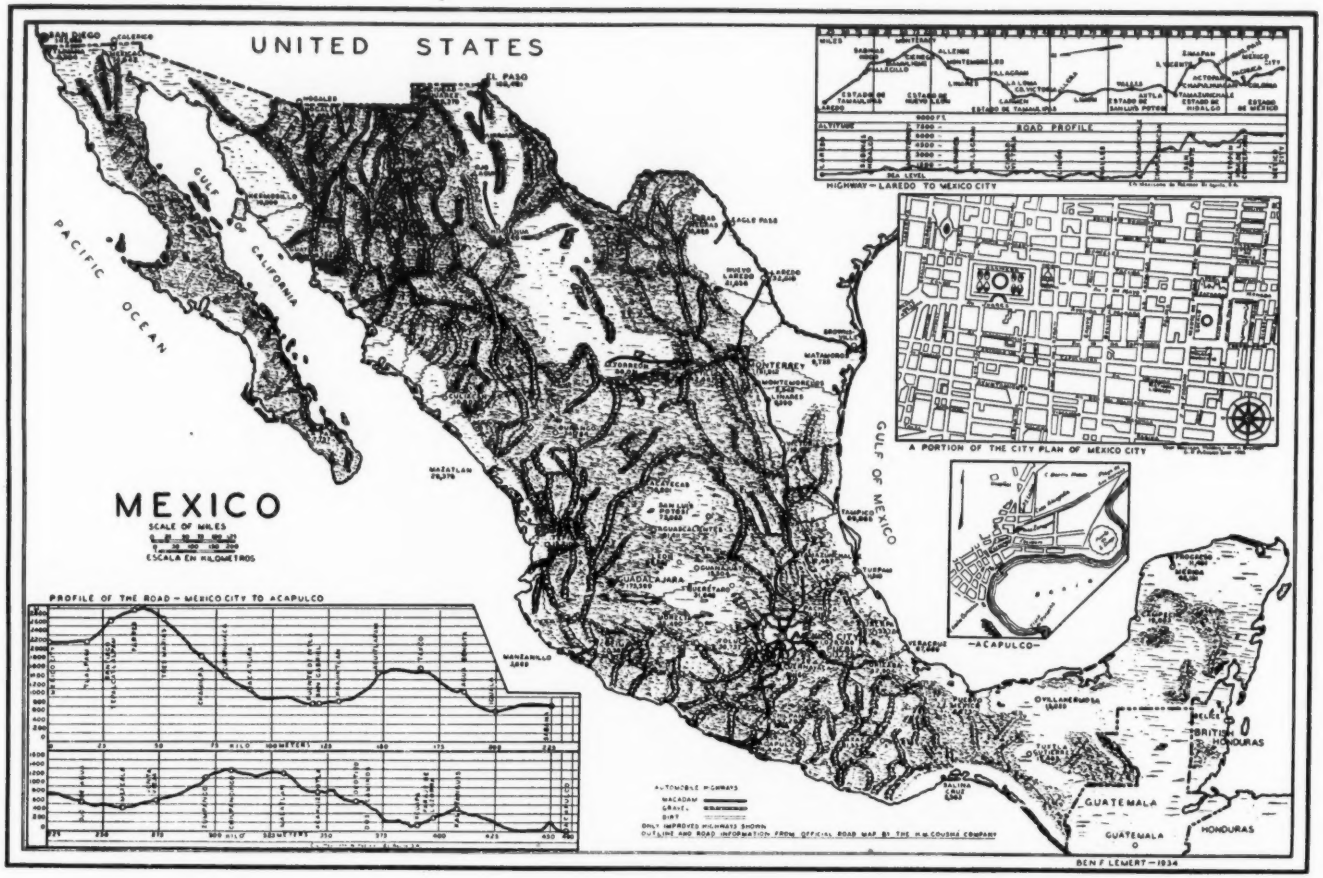
The United States has two foreign countries along its boundaries —Canada and Mexico. It is hard for many Americans to regard Canada as a foreign country because they have intermingled to a great extent with the Canadian people. The closer the bonds of understanding the farther into the distance recede political barriers or dividing lines. We cannot say the same for Mexico. Language, race, and means of transportation have been influences in keeping the United States and Mexico apart. Very few Americans speak Spanish. English is a strange tongue to most Mexicans. The section of the United States bordering Mexico is sparsely populated. Means of transportation reaching the great mass of Mexican people have long remained poorly developed. There has never been a movement of the two peoples across the border in great enough volume and far enough into the respective countries to promote a great growth of common understanding.

BARRIERS TO COMMON UNDERSTANDING

Americans have received their impressions of Mexicans via the fiction story, the newspaper, the movie, and a few Mexican laborers scattered about the United States. Such mediums of information, due to their inherent nature, must convey a grossly distorted picture. Urban dwellers in Mexico likewise form their impressions of Americans via the newspaper, the movie and a few tourists. The great mass of people living thruout the country have no conception of American life. The United States seems to them a far off country of which they hear so little.

MEXICAN PROGRESS WITH AMERICAN COOPERATION

The people of Mexico are close to the American people when the intervening distance is measured in miles. They are widely separated from us by an immense cloud of ignorance due to lack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ROAD PROFILE
HIGHWAY - LAREDO TO MEXICO CITY
A PORTION OF THE CITY PLAN OF MEXICO CITY
AUTOMOBILE HIGHWAYS
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GRAVEL
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ONLY IMPROVED HIGHWAYS SHOWN
OUTLINE AND ROAD INFORMATION FROM OFFICIAL ROAD MAP BY THE H.M. COUSINS COMPANY
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HONDURAS
BEN F. LEWERT - 1934

FIG. 1.

of understanding. The dispelling of this cloud will depend upon two developments—the building of good means of intercommunication by automobile roads, and the rise in the standard of living of the Mexican people. Mexico is already proceeding with the development of its highways. The American people are anxious to visit these neighbors who have always been so near, yet at the same time, so far removed. The evolution of a common understanding will be retarded due to the lower scale of life in Mexico. The unequal standards of the two peoples means more Americans will be carrying their culture to Mexico than will Mexicans be intermingling with people in the United States. Even with this unequal mixing of peoples, the progress of the Mexican people is bound to continue. It is not unreasonable to hope that the understanding between the two countries will improve more within the next generation than it has during all those generations which have passed.

FIG. 2. A portion of the Pan-American highway as it passes thru the Sierra Madre Oriental. Clouds cover this view frequently.

When referring to the progress of the Mexican people the writers are not thinking of those who live on large estates and who often profit from the ignorance of their workers. A few Mexican citizens do own magnificent haciendas. The great body of the Mexican people live in hovels on little patches of land. They are an agricultural people. Tho their mineral riches may be extensive and tho there are spots of manufacturing development, the greatest wealth of the Mexican people is in their tillable land and the products they wrest from the soil that covers that land.

THE INFLUENCE OF RACE

The population of Mexico consists for the most part of Indians and a mixture of Indian and Spanish. It is said by some observers that this mass of population bearing its Indian blood is one of the

important factors holding back Mexican progress. Doubtless the statement is true. It is not a hopeless condition. The Indians of Mexico had made great progress before the so-called higher culture of Europe reached them. Their hopes and ambitions were thoroly crushed by the selfish characteristics of their conquerors. Progressive peoples have been conquered before, have remained dormant for generations, and yet again arisen to proclaim their place among mankind. Italy might be taken as a modern example. Mexico possesses great potentiality. The environment which once made possible the development of a high degree of progress has remained stable. It requires two elements to create progress—people and environment. One of these elements, the people, was rendered impotent. The environmental element immediately became passive and a potential force it still remains.

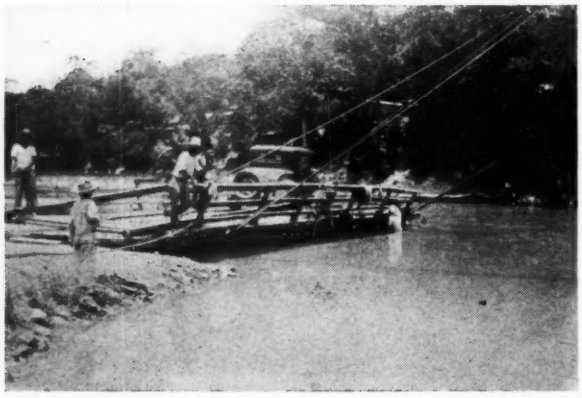

FIG. 3. This is still the method used in crossing rivers on the Pan-American Highway between Ciudad Victoria and Pachuca. The traveler is warned to avoid bathing in this stream because of crocodiles.

Some Mexican officials would have us believe that the Mexican people live just like we in the United States. A visit to Mexico City, life in its best hotels, and travel by conducted tours would seem to lend weight to such statements. A journey beyond the immediate influence of the large centers of population demonstrates the falseness of the assertion. The standard of living of the great agrarian class is not far above that of the savage.

It is these people who will have the greatest number of steps to climb on the ladder of progress. They have the hereditary ability. Perhaps they must be shown they have that ability; not only shown but assisted in developing it. Their progress will be slow, but any progress is promising.

THE INFLUENCE OF INTERCOMMUNICATION

As Mexico builds roads over which automobilists may venture with ease, the Mexican people will know more and more about the

great progress that has taken place in the land of their northern neighbor. They will see these tourists enjoying life and possessing things they themselves have hardly dreamed existed. Those that now live beside the road in their grass huts will become ashamed of such living conditions. The influx of travelers, bringing money into the country will stimulate many occupations and more people will have more money with which they can buy a greater variety of better commodities. There is no reason why the same change in roadside conditions that occurred in the United States with the building of paved highways will not take place, tho at a somewhat slower rate along the Mexican highways. Already there are instances of modern gas stations taking place of a barrel of gasoline in front of a hut along the highway where as yet the traffic is light. Improvement in living conditions means improvement in physical well being and mental development. Those who do not live along a paved highway cannot help see the progress of those that do and a wave of improvement should spread.

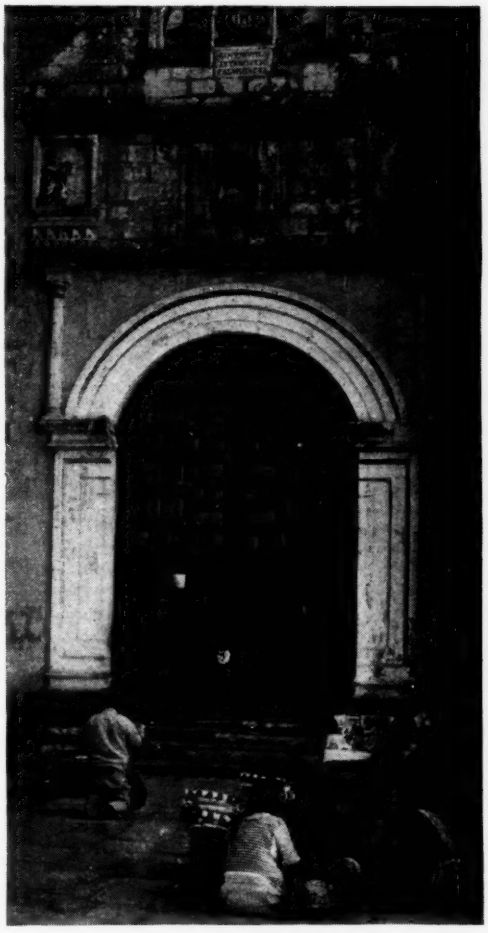

Fig. 4. The native women sit in front of the church entrance selling hand-made textiles and food. Commerce, gossip and prayer, altho simultaneous, do not seem to conflict in such places.

A large body of Mexican people live in squalor unknown and unimaginable to most Americans. Those that are progressive or perhaps lucky enough to assume the position of a middle class, lament the fact that Mexico has no great intelligent middle class. They mourn the fact that such a great body of ignorant people is clay in the hands of the

selfish rich, or the ambitious politicians. The writers do not think this condition is permanent. They do think it will disappear, knowing that the Mexican government is doing that thing most capable of raising standards of its people—the building of good means of transportation which means the improvement of intercommunication. The resultant mixing of the people will weld them into a firmer mass of better understanding which promotes co-operation and concentration of activities along definite lines.

Those Americans who would visit Mexico to observe the primitive living conditions—if they have nerve to get far enough from modern comfort to seek them out; those Americans who love to observe things which hark back to ages of much less progress and much inferior well-being; those who go to Mexico that they may obtain from the people riches the value of which the original owners are ignorant—all such people have a few years left in which to satisfy their desires. It will not be many decades before Mexico approaches the conditions found in the United States. The barrier of ignorance will be gone. Language will remain a distinguishing factor. Its influence will be measurably lessened. The Mexicans will cease to be objects of curiosity as their nation assumes its place among the progressive nations of the world.

GEOGRAPHY AND REGIONAL PLANNING*

G. DONALD HUDSON
Chief, Geography Section, Division of Land Planning and Housing,
Tennessee Valley Authority

THE TENNESSEE VALLEY AUTHORITY

On May 18, 1933, the Seventy-third Congress approved the Tennessee Valley Authority Act of 1933. The introduction states that it is an act:[1]

To improve the navigability and to provide for the flood control of the Tennessee River; to provide for reforestation and the proper use of marginal lands in the Tennessee Valley; to provide for the agricultural and industrial development of said valley; to provide for national defense by the creation of a corporation for the operation of government properties at and near Muscle Shoals in the State of Alabama, and for other purposes.

Following this are the thirty sections of the Act. Twenty-eight have to do mostly with the organization, powers, duties, and limitations of the Board of Directors, which is the body corporate, and with dams, reservoirs, fertilizer, power, flood control, navigation, and the like. The two remaining sections, twenty-two and twenty-three, are of special interest in the present discussion because in them the Congress made possible regional planning in the Tennessee Valley. These two sections are as follows:[1]

Section 22—To aid further the proper use, conservation, and development of the natural resources of the Tennessee River drainage basin and of such adjoining territory as may be related to or materially affected by the development consequent to this Act, and to provide for the general welfare of the citizens of said areas, the President is hereby authorized, by such means or methods as he may deem proper within the limits of appropriations made therefor by Congress, to make such surveys of and general plans for said Tennessee basin and adjoining territory as may be useful to the Congress and to the several States in guiding and controlling the extent, sequence, and nature of development that may be equitably and economically advanced through the expenditure of public funds, or through the guidance or control of public authority, all for the general purpose of fostering an orderly and proper physical, economic, and social development of said areas; and the President is further authorized in making said surveys and plans to cooperate with the States affected thereby, or subdivisions or agencies of such States, or with cooperative or other organizations, and to make such studies, experiments, or demonstrations as may be necessary and suitable to that end.

Section 23—The President shall from time to time, as the work provided for in the preceding section progresses, recommend to Congress such legislation as he deems proper to carry out the general purposes stated in said section, and for the especial purpose of bringing about in said Tennessee drainage basin and adjoining territory in conformity

* An Address Delivered at the Annual Meeting of the National Council of Geography Teachers, Philadelphia, Pennsylvania, December 26, 1934.

[1] Public—No. 17—73d Congress; H.R. 5081.

with said general purposes (1) the maximum amount of flood control; (2) the maximum development of said Tennessee River for navigation purposes; (3) the maximum generation of electric power consistent with flood control and navigation; (4) the proper use of marginal lands; (5) the proper method of reforestation of all lands in said drainage basin suitable for reforestation; and (6) the economic and social well-being of the people living in said river basin.

Rather than set up an independent body whose duty it would be to carry out the provisions of these two sections, the President delegated this duty to the Board of Directors of the Tennessee Valley Authority by an executive order dated June 8, 1933.

As the organization of the Tennessee Valley Authority stands today it consists of twenty-three functional divisions that are directly responsible to the Board thru the Coordination Division. These twenty-three divisions are divided into three functional groups, namely: (1) Management Services, including Personnel, Finance, and the like; (2) Engineering Construction and Operating Services, including Electricity, Engineering and Construction, and Fertilizer; and (3) Planning and Demonstration Services, consisting of the Agricultural Division, the Industry Division, the Land Planning and Housing Division, the Engineering Planning and Geology Division, the Social and Economics Division, and the Forestry Division. The Land Planning and Housing Division, in which the geography work is concentrated, consists of five sections, namely: Geography, Town Planning, Architecture, Recreation and Conservation, and Service and Drafting.

THE MEANING OF REGIONAL PLANNING

Obviously no definition of geography need be offered here. We should, however, consider in some detail the meaning of regional planning. Benton MacKaye, regional planner, Land Planning and Housing Division, approaches the subject by considering first the question[2] —What is planning? Treating it from four angles he says, first, that *planning is a means to an end.* The point of planning is to attain something and not merely to describe something. Planning must have a purpose, and that implies agreement among those affected as to what it is they want. The architect's plan serves as an example. He does not design a structure without first determining the use to which the structure is to be put, or in other words, the agreed purpose of the occupants.

Second, *planning must be elastic but the end must be steadfast.*

[2] In an unpublished memorandum, "What is a Region in Planning," Oct. 8, 1934.

We never know what tomorrow may divulge. It may be new resources or new uses of known materials. Change of plans is the life of planning but not change of purpose. The goal must be constant, tho the means of attainment must continuously adjust themselves to varying conditions.

Third, *planning is visualizing.* Planning discovers what nature renders possible. It does not build nature. It builds upon nature. Planning does not produce rainfall or forest growth. It does not contrive. Its beginning is in discovery or visualizing.

Fourth, *the thing planned is movement.* Planning is dynamic and not static. We plan a region not as an inert area but as a sphere of action. We plan the movement or activity going on therein—especially the potential movement capable of going on therein. There are three types of such movement, namely, flow of waters, flow of products, and flow of population. Special purposes apply to each: (1) the flow of waters for the purposes of domestic water supply, irrigation, navigation and power; (2) the flow of products to achieve local self-sufficiency, or local specialization, or some definite balanced combination in between; and (3) the flow of population to achieve a livable and desirable environment—urban or rural.

The purposes of the planning activities of the Authority are defined very specifically by the Tennessee Valley Authority Act. They are the bringing about of:[3] (1) the maximum amount of flood control; (2) the maximum development of said Tennessee River for navigation purposes; (3) the maximum generation of electric power consistent with flood control and navigation; (4) the proper use of marginal lands; (5) the proper method of reforestation; and (6) the economic and social well-being of the people in said river basin.

Benton MacKaye's specifications for planning in general and the Congress' specifications for the purposes of planning in the Tennessee Valley give us an adequate working knowledge of that phase of the regional planning responsibilities of the Tennessee Valley Authority. With these in mind, let us turn next to the *planning* region. Unfortunately, this question vital to regional planning, seems to have been somewhat avoided by most regional planners and touched upon by a few only very lightly. Fortunately one has treated the subject thoroly.

In an unpublished memorandum dated August 20, 1934, Benton MacKaye describes a planning region as "any portion of it (the Tennessee River Basin) making a convenient physical unit for pur-

[3] Section 23, Public—No. 17—73d Congress; H.R. 5081, page 13.

poses of working and living.''[4] Treating this subject more fully in a memorandum dated October 8, 1934, the same writer traces the region concept thru a series of steps before he brings us to the *planning* region.[5] He speaks first of regions of custom, meaning areas that have been recognized by one or more groups as having the character of regions. He offers as examples the Tennessee River Basin, the New York Milk Zone, and others. These, he says, have in common the qualities of territoriality, of homogeniety in at least one respect, and definite boundaries. On this basis we can say, for the moment that ''a region is a homogeneous piece of territory definitely bounded.'' Most such regions, he holds, are not subjects for the planner.

Next he speaks of spheres of authority, areas set aside by some agency having the authority to do so. Such a body, the Congress, created a sphere of authority in establishing the Tennessee Valley Authority. These spheres, he says, are not things that people habitually call regions, but clearly they are subjects of planning because of delegated authority and specific instructions.

Third, he turns our attention to spheres of influence. An example is the British sphere in the Chinese Yangtze Valley. There are three types of spheres of influence all of which, he submits, are subjects of planning, namely, (1) those based on flow of water, (2) those based on flow of products, and (3) those based on flow of population.

Finally, the writer brings us to the planning region. At this juncture he presents a list of ''objects which the regional planner might call regions.'' Some of the ''objects'' are: (1) the area of the Tennessee River watershed, (2) the flow of water in the Tennessee River, (3) the flow of hydro-electric power from Muscle Shoals, (4) the flow of passenger traffic within range of the Lee Highway, and (5) the ''backflow'' of population from Nashville. He notes four elements common to all. The first is movement; the second is purpose, the purpose being optimum human living; the third common element is movement from a source; and the fourth is unity or integrality; an integral activity or an integral place or sphere of activity.

Bringing his concepts of *planning* and of *planning regions* together Benton MacKaye gives us this definition of regional planning:

[4] In an unpublished memorandum, ''Regional Plan No. 1,'' Aug. 20, 1934.

[5] In an unpublished memorandum, ''What is a Region in Planning,'' Oct. 8, 1934.

Regional planning is a comprehensive ordering or visualizing of possible movement, activity, or flow (from source onward) of water, products, and population, within a defined area or sphere, for the purpose of laying therein the physical basis for extending that range of choice which amounts to the good life or optimum human living.

MAJOR CONTRIBUTIONS OF GEOGRAPHY

The contributions that geography can make to regional planning are too many and too diverse to permit our enumerating and discussing them all. There are four, however, that we should discuss in some detail because of their unique geographic nature and their major importance to regional planning.

First of these is the broad regional perspective peculiar to geography. Benton MacKaye mentions several types of areas that are recognized by one group or another as having the character of regions. He might have added to his list examples from the fields of anthropology, archaeology, bacteriology, physiography, political economy and many others. He states quite definitely that most such regions are not subjects for planning. The reason is evident. The regional perspective of these fields is too narrow.

Regional planning is concerned with one major item, namely, the use of the earth's resources for optimum human living. It is quite clear that regional planning is not planning the use of any one of the earth's resources or the optimum development of any one human activity. Regional planning must be all-embracing in its perspective. If it is not, any plan that is formulated is doomed to become an ill-balanced, unfused mixture of individual interests—agricultural, mining, industrial, and all the rest. As an unfused mixture the attainment of optimum human living is impossible because individual interests, knowingly and unknowingly, push their own desires regardless of the rightful parts other interests should play in the regional whole. Regional planning must do more than merely say that every human interest can function so long as it promotes optimum human living. Regional planning must guarantee that every such human interest is provided the opportunity to function. This approach requires a broader perspective than that of such research fields as chemistry, botany, geology, and agriculture. The perspective which is required for regional planning is essentially the broad "human use" approach that has characterized geography's treatment of regions for many years. Geography sees regions in terms of rounded-out human occupance, that is to say, in terms of a complex, rather than in terms of series of distinct human activities, or series of separate physical settings. No other recognized

discipline is so particularly concerned as is geography with the intimate association of peoples in all their activities with the areas they occupy. This approach lays the foundation for a second major concern of geography, namely, the study and understanding of relationships between and among regions. These approaches necessitate an all-embracing regional perspective that is unique to geography. A full application of this perspective to regional planning problems is a major contribution that geography can make.

The second contribution that geography can make to regional planning is the application of sound geographic thinking with regard to the relationships between human activities and their physical settings. This type of thinking is essential to the analysis and understanding of the regional structures involved in regional planning. Expressed in terms familiar to geographers, regional planning is the elimination of maladjustments in the human use of the earth's resources. The regional structures consist of human activities, on the one hand, and the natural elements, on the other. Understanding these structures sufficiently for planning purposes requires thoro familiarity with the cultural complex and the natural complex in all their many individual aspects. With this a part of the planning process, the next step is a thoro understanding of and an appreciation for the inter-relationships between man and nature. The purposes these understandings serve constitute a vital part of the regional planning process. They make possible the formulation of a regional plan that is in keeping with those specific human elements, and natural elements, and the inter-relationships that exist between the two, that properly characterize the region for which the plan is intended. Also, because of the detailed factual background these understandings require, they serve the purpose of objectifying the plan for a specific region so that it can be applied.

The study of the relationships between cultural and natural landscapes has in one form or another been a major concern of geography for many years. The study of these relationships in terms of regional patterns has been a major concern of geography since the early 1900's. Associated with both of these two major tasks has been the discovery and measurement of maladjustments in the human use of the earth's resources. The advent of regional planning into modern affairs has provided an opportunity for the practical application of geographic thought and investigation on a much wider scale than was heretofore possible. This does not mean

a change in the specific abilities, habits, and attitudes inherent in geographic thought. They remain the same. Their application to problems of regional planning constitute a second major geographic contribution.

A third major contribution that geography can make to regional planning is an approach that is truly scientific. The need for this is particularly great in the delimiting of planning regions. Decades, if not centuries, of study have been required to set up even the more simple of regions recognized in other fields. Numerous, thoroly tested techniques have been developed in the process. Regional planning can and should utilize those techniques that are applicable to planning regions. The necessity for bringing every technical skill available to bear on this problem is particularly urgent in regional planning because regional planning deals with human values. In order to succeed in its mission of planning for optimum human living, regional planning must be certain that the areas it treats are normal human use units.

Just any portion of the earth's surface will not serve the purposes of regional planning. Regional structures, the framework of human activities, must function normally. What series or combinations of factors will throw the boundaries of a planning region into relief depend upon the nature of the structures that characterize the area. Those series or combinations that serve today may at any time be changed, so that the regional pattern is changed. No rule of thumb procedure can be followed. Under these circumstances rules of procedure must be adjusted, but the principles of procedure must remain the same.

The factors that apply in one case may not, and probably will not, apply to another because no two regions are structurally identical. These circumstances require the continuous application of those qualities that identify the truly scientific approach. Without this scientific approach, the purposes regional planning seeks to fulfill are jeopardized.

An approach that is truly scientific can not be put on or thrown off like a cloak. It is developed in a science after years of endeavor and after years of constant application. Regional planning appropriately needs the scientific approach of geography. Other sciences treat regional structures, but geography has long since admittedly taken as one of its major functions the study of regions in terms of their human use. It is that specific scientific regional background

that regional planning requires and not merely a regional background. It is here that geography can make a third major contribution.

Methods of geographic investigation and presentation constitute a fourth major contribution that geography can make to regional planning. The first principle of regional planning has been agreed upon, namely, optimum human living. Planning for optimum human living means but one thing, namely, planning the uses of a region's resources so that the best in human values can be obtained. Under these circumstances the second principle of regional planning must be to know the resources that are available for use. Unless this principle is adopted, there is absolutely no assurance that the plan formulated will fit the region. This necessitates the collection and thoro treatment of data concerning the following: (1) the resources now being used; (2) how these resources are being used; (3) the resources not now being used; (4) the resources not now being used to capacity; and (5) the present condition of all resources when maladjustments and abuses have been rectified. Relative to the accumulation of these data, Wellington D. Jones has the following to say:[6]

> The regions determined by geographical investigation, however, and the characteristics of regional investigation as pursued by geographers, are different from the regions and the investigations of workers in the other disciplines . . . geographers do something other than investigate in succession the geology, the botany, the zoology, the anthropology, the economics, the sociology, the political science, and the history of a region. . . . On the other hand, if geographers . . . restricted their efforts to making syntheses for regions on which these other studies had already been made by workers in the several disciplines involved, geographical investigation of most regions would be postponed indefinitely.

Briefly, the collection and thoro treatment of these data become the geographer's responsibility because his approach alone is in terms of the human occupance of regions. The data obtained by workers in other disciplines, since they are not concerned with the same problem, too often can not be fitted into the geographer's regional scheme. Assuming that they could, the problems would still fall in a large part upon the geographer because his treatment of regions could not await the availability of data from these other disciplines.

The procedures applied by modern American geographers in their investigation of the human occupance of regions have been subjected to a continuous program of intense criticism, examination,

[6] Procedures in Investigating Human Occupance of a Region, in *Annals of the Association of American Geographers*, Vol. 24 (1934), pp. 93-111.

experimentation and countless applications. Their worth to regional planning can not legitimately be questioned. It is safe to say that unless the full use of all these firmly established procedures of investigating and presenting the human occupance of regions is made, the success of regional planning will be seriously jeopardized. If the development of separate procedures is attempted the establishment of regional planning as an accepted principle will be greatly retarded.

These then are four major contributions that geography can make to regional planning: (1) geography's broad regional perspective; (2) sound thinking with regard to the relationships between human activities and their physical settings; (3) geography's scientific approach; and (4) methods and techniques of geographic investigation and presentation.

FACTORS IN THE RECOGNITION OF GEOGRAPHY*

Is geography making these and other contributions? In a number of instances, it is. But with regard to the present regional planning work going on in the United States as a whole, it is not. It might be interesting to enumerate some reasons. First, few men in geography are in a position to give time to this type of work. Their major obligations are, from necessity, concerned with teaching rather than research. Second, the number of men trained in modern geograpic techniques is relatively limited. And, third, the methods, techniques, and contributions of geography are not fully known by the general public.

The major factors lying back of this situation are three. One is the type of training that characterizes courses in geography from the lower levels upward. Professor Harlan H. Barrows says: "Why is geography, though potentially so important, neglected or ineffectively used in countless connections where it might function helpfully? Faulty geographic training, especially at the earlier levels, is, I think, largely responsible for the situation."[7]

A second factor is the strict adherence of geographic research to the principles of scientific method. The geographer has been forced by the dictates of his scientific approach to know first the thing with which he deals, namely, the region. The thought of

* There has been considerable increase in the recognition of geography's contributions to regional planning since this paper was prepared in November, 1934. Author.

[7] Geography and the Individual, *The Ohio State University Bulletin*, Vol. 35, No. 3, Sept. 15, 1930, p. 238.

evolving any plan, any improvement, or any change whatsoever was maintained only in the background as a motivating force while he set about the task first of developing and perfecting techniques of investigation, analysis, interpretation, and presentation. This task is of a highly professional nature. It is comparable to the years of laboratory work that precede the brief, and often undramatic public announcement of a discovery in chemistry, or medicine. Geographers do not contemplate changing their scientific approach or making a great public announcement, but an appropriate time has come in the history of their science and in the affairs of the day for them to devote a greater share of their skills to wider public uses.

The scientific discipline under which geographers work has hindered in another way the full use of geographic skills and has thus kept a full knowledge of geography's contributions from the public. On occasion one agency or another has turned to the geographer for solutions to problems that were rightly thought to be primarily geographic. In the treatment of such problems, the geographer refuses to be hurried into making statements that might be misunderstood as being final and conclusive. He refuses to approve plans or promise results until he has sufficient reliable evidence to satisfy him that his position is invulnerable. Far too often agencies seeking assistance become impatient and turn to some one with a ready answer, unaware of the complexities of geographic problems and the long weeks of preliminary "laboratory" work that must be completed. Sometimes programs that would have solved the difficulty have been forsaken and problems have gone unsolved. Other times, more unfortunately, substitute programs from elsewhere have been utilized with the disastrous results of making a bad situation worse. Agencies dealing with geographic problems, particularly those concerning regional human use structures, must realize that every regional structure has characteristics peculiar to itself and that the geographer must, therefore, approach each problem from the standpoint of strict, scientific experimentation. Under these circumstances the geographer can not be expected to state in complete detailed form the procedure he will follow as it applies to specific problems. Neither can he be rightfully expected to state in advance the specific results he is sure to obtain.

The third factor is the extreme complexities inherent in the human occupance structures of regions. Having begun his work with the study of regions, *per se*, no one is in a better position than the

geographer fully to appreciate how truly complicated are these regional structures. The familiarity with these structures developed over years of study gives the geographer a unique perspective that enables him to see the complexities not as a jumbled mass of inextricable items, but as an understandable structural mosaic. Seeing them in this light enables him to go thru the long, painstaking task of extracting one by one, and in appropriate combinations, the items that constitute the structures. This skill enables him to see each factor in its proper light, and to see the subtle relationships that are present. It is then, and only then, that the geographer is in a position to measure the efficacy of present regional structures and to plan programs of reconstruction that aim at the elimination of maladjustments. These points must be remembered; from beginning to end the procedures must move slowly; in some instances attacks must be abandoned because they are found to be inappropriate; and the entire procedure must be looked upon with utmost patience and confidence.

The advent of true regional planning into modern society is the placing of human values first. It is the application of the principle that true values are not measured wholly in terms of costs and profits. Geography has a wealth of contributions to make and the time has arrived for geography to make these contributions. We must remember, however, two important things; namely, as we devote more of our skills to public use we must be increasingly critical of all that we do, and we must not forsake the frontier of geographic research because of the opportunity to participate more widely on the frontier of social and economic improvement.

NEW ENGLAND WATER POWER, FACTS AND TRADITIONS

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That the industries of New England owe their origin to the abundance of easily regulated water power is a firmly established concept in the minds of most geography pupils in our schools today. It is a sound concept, entitled to the major emphasis it frequently receives. A mastery of the implications of this concept should leave the pupil with some realization of the tremendous importance to sound industrial development of an abundant, cheap, and easily accessible source of primary power.

However, we, as teachers, must not abandon the task when we have clinched that primary concept. We must not permit the acceptance of the logical inference that water power has continuously guided the destiny of New England industrial development from its inception to the present day. It is significant that water power has not continued to be the major source of industrial energy in New England.

Within twenty-five years after the establishment of manufacturing in New England, water power was supplemented and in a few places supplanted by steam power. More recently the application of electricity to industry has caused new and highly important changes in the production and use of power in the industry of the New England States.

PERIODS IN POWER DEVELOPMENT

The history of the production and use of power in New England is conveniently divided into two major periods. The earlier period, lasting from pioneer times until about 1910, is characterized by the production of power solely for local consumption. The later period, 1910 to the present day, is the period of electrically transmitted energy.

THE PERIOD OF DIRECT POWER

During the entire direct power period there existed, necessarily, a very intimate relationship between power producing and power consuming units. Power was conveyed from the prime mover directly to the machine either by shaft, gear, chain, or belt. Such direct

methods of power transmission necessitated very compact factory units and, particularly in the case of water power, restricted the expansion of industry.

The direct power period further subdivides into the water power period, pioneer times to 1885, and the steam power period, 1885 to 1910.

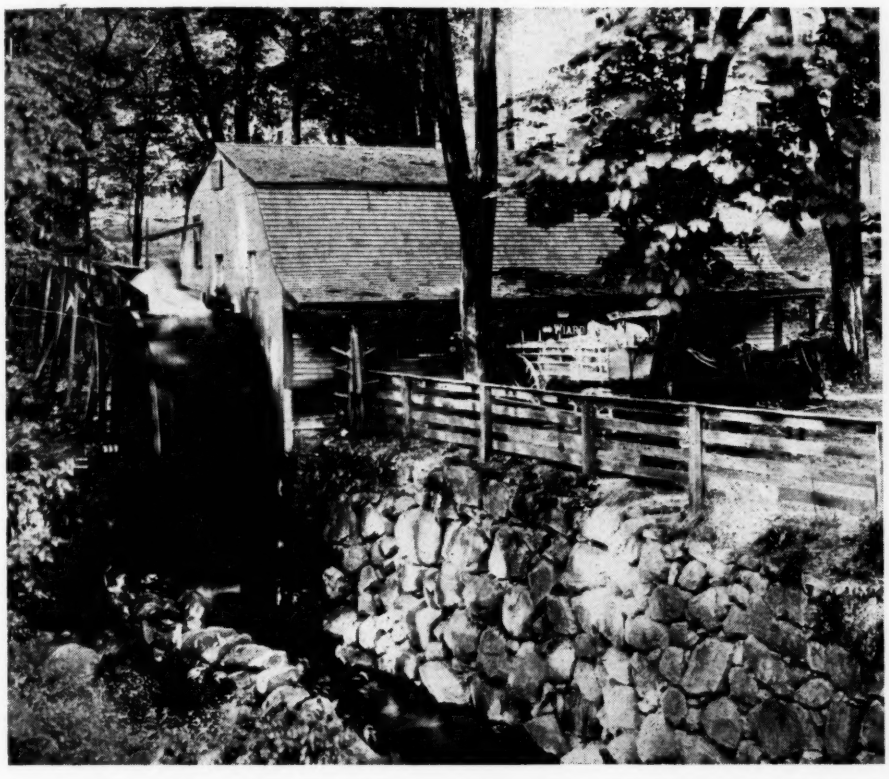

Fig. 1. An old grist mill, New London, Connecticut, built about 1650. This is an overshot wheel of a type common in the early days of power production in New England. Notice the use made of native materials in the stone wall and tail race and in the timber sluice-way. This was an eminently wasteful method of power production capable of utilizing only a small fraction of the available power from only the smaller streams. Its picturesqueness has given this type of mill a prominence in our thinking entirely out of proportion to its industrial significance in New England. Courtesy, the New England Council.

Water Power Period

During this water power period, beginning in pioneer days, both water wheels and water turbines served as prime movers (Fig. 1). Mills were scattered thruout the greater part of New England, most of them occupying sites on the smaller and medium sized

streams. With only a few exceptions the pioneer mill owners avoided development of the larger streams.

The reasons for their consistent choice of small streams rather than large, swift rivers seem to be:

1. Large sites necessitated an outlay of capital too great to be economically practicable. The greatest number of the mills were

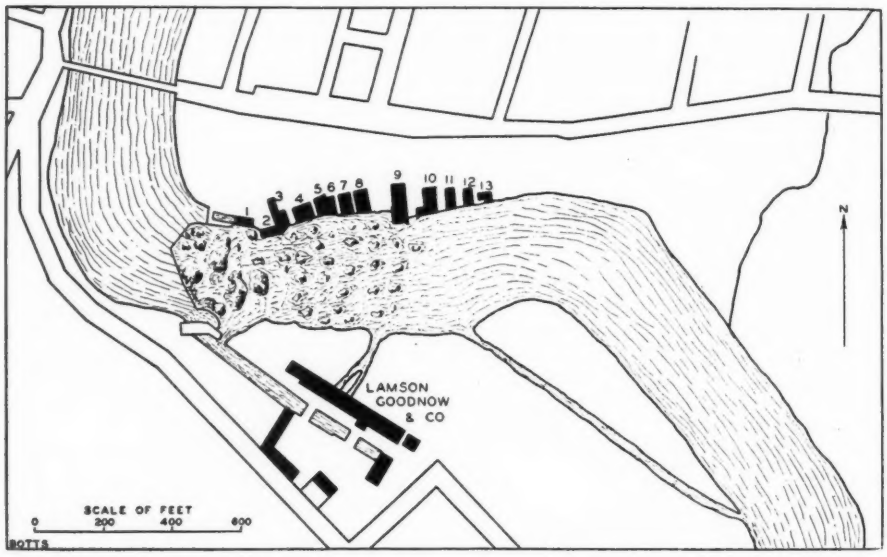

FIG. 2. Early water power mills clustered around the falls in the Deerfield River at Shelburne Falls, Massachusetts, as shown by a detail copied from an original map made from actual survey by George Stevens, 1856.

On the north side of the stream are at least ten power using mills in tandem using the power from the fall. On the other side is the original Lamson Goodnow and Company plant, the ancestor of the only present day survivor of this group of plants. The mills indicated by number on the map are: 1) Lumber house, 2) Saw mill, 3) Old cutlery, 4) Planing mill, 5) Machine shop, 6) Grinding shop, 7) Forging shop, 8) Tannery, 9) Apple parer and gimlet factory, 10) Iron foundry, 11 and 12) Ax factory, 13) Machine shop.

This is one of the few sites on a relatively large stream, which was harnessed by the early industrialists of New England. An outcrop of resistant granodiorite at this place caused the fall and aided considerably in its development.

owned by capitalists of moderate means who found it more desirable to make modest developments on small streams than to undertake extensive improvements on the larger ones. In only a few cases—as at Shelburne Falls and Holyoke, Massachusetts, and Manchester, New Hampshire—were large rivers harnessed for industrial use. Even in these cases the developments consisted of series of small

separately owned institutions rather than one large enterprise (Fig. 2).

2. All the power generated at the developed sites had to be consumed on the spot; but there were no native raw materials which would use large powers any more economically than small ones.

3. Many of the potential large sites, those which contain the largest units of hydroelectric developments in New England today, were too isolated from sources of raw material which might use large quantities of power.

4. These larger sites were likewise handicapped by isolation from markets for large volumes of manufactured goods.

5. Completeness of stream control was, during the water power period, much more easily accomplished on the small stream than on the large ones. In order to insure independent operation of a development and to secure adequate control of the stream flow it is expedient for the owners of power sites to own or lease that part of the drainage basin contributary to their mill ponds. In many cases it is necessary to flood extensive areas in providing reservoirs and ponds.

6. The power requirements of the scattered, small, relatively self-sustaining communities were best met by small or moderately sized mills on various branch streams.

ENVIRONMENTAL INFLUENCES

The glacial history of New England aided the development of water power of the sort used in the early period. Loose, porous soil and swampy depressions retarded run off after rains, and deranged drainage provided many small falls and rapids. Forest cover on the rolling hillsides slowed up the run off still more, and, in addition, provided a raw material (lumber) which required much power for its fabrication. Glacial boulders furnished an abundance of building material for dams and sluice ways. All small glacial lake beds provided level areas for the industrial activities of numerous agricultural communities.

In spite of advantageous physiography and exceptionally uniform rainfall, New England streams experienced severe freshets in the spring and became practically dry in the late summer. These conditions in addition to long cold winter seasons necessitated long periods of inactivity and, at times, resulted in extensive damage to mill property.

The spring freshets owe their occurrence to the rapid melting of the accumulated snows of winter. Occasional severe floods, at other times in the year, have been caused by unusually heavy rainstorms such as that which accompanied a tropical storm into New England in the fall of 1927.

The other handicap to steady power production, low water in late summer, is explained by the high rate of evaporation and the great amount of transpiration from the abundant vegetation flourishing in that season.

In response to the combination of favorable factors, many New England towns owe their industrial significance to the early development of water power sites.

STEAM POWER PERIOD

After the Civil War, with the widespread introduction of coal as an industrial fuel, many of New England's industries found it to their advantages to either abandon their power sites, and substitute coal or to supplement their water power plants with auxiliary steam plants (Fig. 3). The demand of rapidly growing industries made these changes necessary. The power units could, with coal, be made to fit the requirements of the plant. A plant once started could grow indefinitely without seeking a new power site. And, in addition, such factors as fluctuating stream flow no longed interfered with mill operation.

Just as accessibility to water power accounts for the industrial significance of many New England towns, so convenient access to coal imports accounts for the significance of others. Seaboard towns and towns on railway cross roads tended to experience a period of growth and increased industrial expansion coincident with the establishment of steam power. During that period New England industry crowded the seaboard. The external location of its coal supply thus constituted a dominant factor in influencing the location of New England's industries during the period of steam power.

The steam power period was in some ways the most "artificial" period in New England's industrial history. During that time practically all of its power was imported in the form of coal. Its raw materials were obtained from all over the world. And its products, in turn, depended upon an outside market for their consumption. Not even its capital and labor could lay claim to being strictly "native."

PERIOD OF ELECTRICALLY TRANSMITTED POWER

With the advance of the period of electrically transmitted power New England's water power has regained much of the importance it lost during the steam power period. It has restored to New England a sound native resource with which to maintain its present

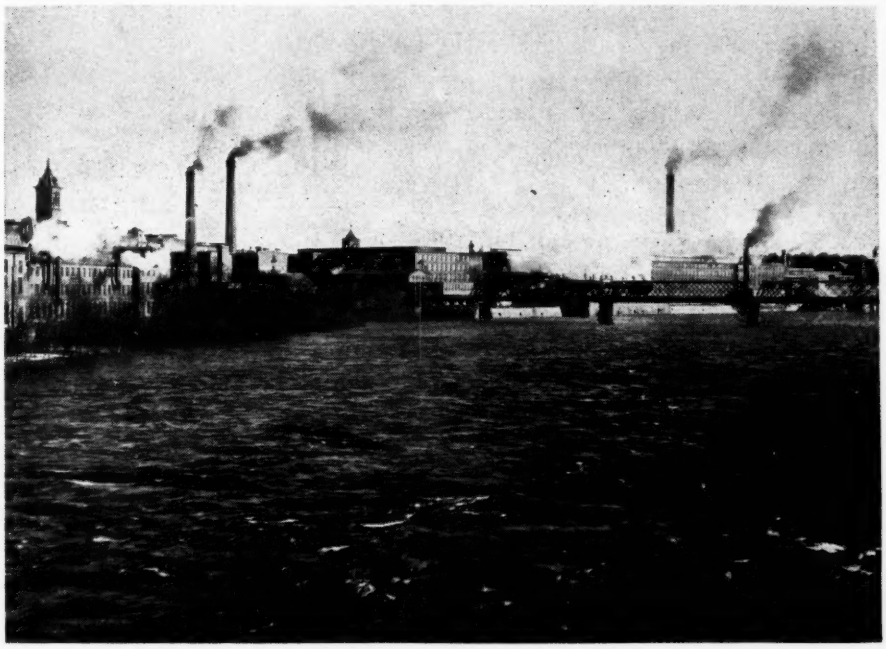

FIG. 3. Textile mills on the Merrimac River, Lawrence, Massachusetts. This picture is typical of New England's industry in the period characterized by the direct use of steam power. Many plants, such as this, were installed as water power mills at an early date but expanded only when they were able to substitute steam for the limited power available from the streams. The smoke stack was the sign of the emancipation of New England's industry from the tyranny of the small glacial stream. Courtesy, the New England Council.

industrial importance. But in spite of remarkable development in the last quarter century hydroelectricity is not yet the dominant source of industrial energy in that region. In 1933 New England had a rated water power capacity of 813,494 kw., and a steam power capacity of 2,125,630 kw. for the production of electrical energy. However in actual production for that year water power produced 2,652,197,000 kw. hr. and steam power 3,414,413,000 kw. hr. Thus altho water power constitutes only 27.7 per cent of the rated gener-

ator capacity, water power actually produced in 1933 43.7 per cent of the electrical energy of New England.

The major factor determining New England's consumption of electrical energy is its industrial activity. Much of the power generated in the area is used directly in the operation of machinery. Industrial activity indirectly influences the demands for electrical energy by fostering large, compact population groups with extensive electrical needs for domestic, municipal, and transportational purposes.

Modern inventions in generating, transmitting, and distributing electrical energy permit development of power sites in isolated parts of the region. In such regions land is cheap and human settlement and cultivation of the soil do not compete with the hydroelectric companies for the use of the land. Futhermore, most of the potential power sites lie well within economical transmitting distance (250-300 miles) of the great power market of New England.

The most valuable power developments of the present day occupy sites on the primary and larger secondary streams. Contrary to the situation in the pioneer period the smaller streams and tributaries can not be developed economically.

Environmental Influences in the Hydroelectric Period

The preglacial physiographic history and geologic structure of New England set the stage for most of the modern hydroelectric developments in the region. The glacial features of the environment are of minor significance.

Many of the large hydroelectric plants occupy sites where the streams descend from the high New England peneplain to the lowlands. In a few localities outcrops of extreme hardness have interrupted uniform erosion and produced falls in the lower portions of rivers so large as to merit hydroelectric improvement.

Modern inventions in dam construction and in water conducting devices permit the development of power plants on sites where the fall is distributed over several miles of stream course. By means of canals, conduits, and tunnels, used singly or in tandem, water is conducted along or thru a hill to a point above the power house. There it is directed into the penstocks which carry the water to the turbines in the power house down on the old stream course. Rock tunnels, wood stave or concrete conduits, and hillside canals varying in length from a few rods to three or four miles are not uncommon features of England's present day water power plants.

The streams of New England have their peak flow in the spring and early summer; but reservoirs of modern power companies store up much of the excess water and save it for the late summer period of low water. Incidentally, the protection of down stream areas against floods is an important by-product of river regulation in this region.

MARKETING HYDROELECTRIC POWER

In the open power market, hydroelectricity meets both the competition and complement of steam generated electricity. From the competitive standpoint the production of steam power prevents development of small and medium sized water power sites in which the original capital expenditures are high in comparison with the potential output. On the other hand, steam generated electricity complements water generated power by insuring an adequate power supply for the market regardless of weather conditions or the extent of market demands.

In 1933 56.3 per cent of all the power produced for sale in New England was produced by the use of fuel, largely coal, except in Rhode Island where more than 92 per cent of the power was produced with the use of fuel oil.

SUMMARY

In the past, teachers of economic geography have often dismissed the study of power production and use in New England with a glib reference to the outstanding significance of water power in that region and have all too often accounted for that hypothetical greatness as "due to the advantages of glaciation." I have tried to point out briefly that water power has not played a major role in New England industry except in the earliest days of the industrial era; that New England sustained its greatest industrial growth with steam power; that its industry flourishes today by securing more than half of its power from coal and fuel oil; that altho hydroelectric developments are increasing in size and number they do so facing strong competition from fuel consuming electric plants; and that the present day hydroelectric plants owe their greatness not to the glacial but to the pre-glacial physiographic history of New England.

THE BALKANS AS A WORLD PROBLEM

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New York University

In spite of the obscurity surrounding the underlying social realities of the Balkan Peninsula, we are definitely aware of its existence because its constant social conflicts make periodically the front pages of our newspaper. We must not fail to remember that six major wars have started in the Balkans in scarcely more than half a century. We must not forget that the conflagration of the World War flamed up there in 1914, that the control of the Balkans and of the Dardanelles was the primary object for which the Central Powers fought their losing battle during the World War, that thru the intervention of Turkey and Bulgaria the greatest war in history was prolonged; it must be added that it was in the Balkans that the victory of the Allied armies was earliest, and most decisively won. Even after the signing of the peace treaties, the problem of Turkey kept Europe agitated for four more years and the periodical difficulties arising from the exchanges of the populations have until very recently required the attention of statesmen and of the League of Nations. Nor is it yet a solution to view as settled for the whole problem of the Balkans is still a challenging one, and the efforts to provide the basis of lasting peace in the Balkans should deserve our most serious attention.

If we want to go a little more into the history, then let us recall that it was the Balkans that produced Alexander the Great; it was the Balkans that allured Christianity and its greatest statesman, Paul of Tarsus, across the Aegean, from Asia into Europe, and so altered the whole course of history. It was not by accident that the World War began there. Here was a spot where the Austro-Hungarian and German ambitions were being thwarted by the ever-growing power of the little Balkan nations—lying directly across the historical highway of Europe and Asia, with Istanbul, for its gate city. The Balkans was a barrier to the grandiose project of the Central powers.

If we are to give a sociological interpretation of the Balkans, let us, first of all, consider the geographic factor.

THE GEOGRAPHIC FACTOR

The Balkan Peninsula has served as a natural bridge for the surging waves of migratory movements between Europe and Asia,

with one thorofare joining Asia and Europe and another joining the Black Sea and the Mediterranean. Both by its geographical location and by topography the territory seems to have been predestined for conflict. By its location the Peninsula has been hauled and pulled between the social forces of the two continents. Altho a part of Europe, the physical relief of the area turns its back on Europe: all its rivers run to the East and South. It is a Peninsula cut across by hardly accessible mountain ranges, and as a whole, the whole region is considerably elevated above sea-level. Communication is, in modern terms, limited and unsatisfactory.

This is intensified by the fact that the northern section of the Balkan Peninsula is largely out of touch with the surrounding seas, not only because of its width but also on account of the nature of the shore-lines, and, in part, of the direction of the mountains. While the southern part of the Peninsula is accessible to sea-routes, the northern part is actually remote from them. This, in turn, promotes the centrifugal tendencies in the Peninsula. Thus the topographical structure of the region, as pointed out by Dr. Newbigin, is such that there is "no natural centre about which a great state might crystallize, and, further, that the existence of two, broad, diverging lines of communication, running respectively north to south and north-west to south-east, facilitates the entrance of alien peoples, and makes the establishment of even small states difficult. There is no natural rallying point. . . . The valleys are but drowned river valleys. There is no natural line of separation from the plains of Central Europe. The inhabitants have been unable to utilize the natural advantages of the plains partly because the whole region lies open to invasion alike from north and from south." In fact, no mountain barrier separates the Peninsula from the Continental mainland, as Italy is separted by the Alps and the Iberian Peninsula by the Pyrenees. Thus there is no real separation between the Balkan Peninsula and Central Europe. This physical continuity is accentuated by the notable increase in width of the Peninsula towards the north. Consequently it is nearly impossible to draw a geographically satisfactory frontier in this section; this fact also explains frequent contests for borderlines among the Balkan states and their neighbors.

This geographical accessibility from Asia and Europe indicates why rival cultures, institutions, religions and peoples of the Orient and Occident have been struggling here against each other. The Latin-Teutonic and the Greco-Slav culture and religion met here also on the battle-ground—the victory going to the latter.

THE MOUNTAINOUS CHARACTER OF THE BALKANS

The very word "Balkans" is nothing less but the Turkish expression for mountain. It indicates the mountainous and ragged character of the region. From the geographical viewpoint the Balkan mountains are merely the southern end of the Carpathians, rising to a maximum height of nearly 8,000 feet, cut off, however, from them by the "Iron Gate," thru which the Danube flows on its way to the Black Sea.

The mountains running down the west coast have repeatedly served as shelter to more than one race. But, in fact, the whole region is mountainous, so that the fertile districts are small, and more or less isolated from one another. They are isolated, so to speak, in natural pockets and corners, small basins alternating with mountain chains, which isolate their settlers from the other. There has been a tendency here to social isolation, promoting the creation of independent social worlds, hostile to other groups and adverse to any outsider.

THE CLIMATE

Within this huge territory there is a wide divergence in temperature. The north and north-east of the Balkan Peninsula has extremely cold winds, carrying with them a considerable amount of snow, as the mountains dividing the region from Rumania are not high enough to protect it from the chilly blasts from the great Russian plain. In the south and southwestern regions, protected partly by the Rhodope Mountains and high table-lands, the climate is much milder and the rain comes usually with a south or southwestern wind. The name of these Rhodope Mountains—the "rose-covered hills"—already indicates a better climate. But many districts suffer from sudden changes in the weather; furthermore, there is a great contrast between the temperature of the day and of the night. These sudden changes, bringing in their wake rain, snow and floods, make the means of communication frequently completely impassable. This causes physical isolation, already promoted by other factors, and a relaxation of energy. It makes for communal organization, for home industries. It aids in the promotion of greater social distance between the peasant and the city people.

INTERMIXTURE OF RACES

The biological factor is characterized by the intermingling of numerous races. By its geographical position the Peninsula became

the rear-guard of Europe against the hordes of Asia; this accounts largely both for the extraordinary mixture of races and languages, of religions and political interest, in the Peninsula, and for the continued interest of the great European powers in the Balkans and in the great land-and-sea junction of Istanbul. The multiplicity of racial types has been accentuated rather than wiped out by refuge offered by the mountains. Wave after wave of invaders have overrun the region, imposing an alien culture upon the resentful victims, and adding new racial groups to the already inextricable mixture existing there. For centuries, the Balkan peoples lived here, retaining, side by side and within the same region, an original particularism. There are a dozen local languages and dialects—five of them being of more than local importance: Bulgarian, Greek, Serbian, Rumanian, and Turkish. There are half a dozen creeds, of which the Greek, Moslem, Bulgarian, and Mosaic complicate the nationalistic allegiances of various groups. These differences were expressed in numberless past struggles, filled with mutual injuries, antagonism and memories of oppression.

THE CHARACTER OF GREAT ROUTES

The mixtures of peoples and the invaders which have overrun the Peninsula are direct resultants of the peculiar topography of the region—as already suggested. In this connection we must notice the importance of the Morava trench and the Vardar valley. The narrow gorge of the Morava, a right-bank tributary of the Danube, running almost due north-and-south for over 100 miles was in olden days a scene of constant political movements southward and northward, because it provided a line of access to the hilly interior of the Peninsula. The political power dominating the Morava valley can relatively easily control the rest of the Peninsula, because from the Morava it is possible to reach the Vardar River, which enters the Aegean to the west of Salonica.

In fact, that the progressive contraction of Turkish territory in the nineteenth century and before 1918 led to such bitter conflicts was largely due to the character of the routes within the Peninsula, and particularly to the difficult access of Bulgaria and Serbia to open water. As a map will show, Belgrade, Salonica and Istanbul are the three nodal points on the northern, southern and eastern margins of the Peninsula, all being important because of the land and water routes converging upon them and the rail linking them. Belgrade utilizes the Danube and the Save for navigation purposes;

it is connected by railroads with the rest of Europe; and the Morava gorge provides a good line of entrance to the interior of the Peninsula. Salonica has the distinction of being the best port for the whole interior of the Peninsula on the Aegean, because two major land routes, consisting of the meridianal furrow indicated by the Morava and Vardar Rivers, converge upon it, as well as the route from Istanbul to the Thracian lowland. The importance of the Morava-Vardar gorge is evident, in addition, from the railway which follows it from Belgrade to Salonica by way of Nish and Skoplje (Uskub). Istanbul, on the bridge between Asia Minor and the Balkan Peninsula, is connected with Belgrade from the Morava valley, by way of the Nishava tributary; the route then crosses passes to the basin of Sofia, whenceforth it continues into the Maritsa Valley, from which Istanbul is reached.

It must be noted that altho these great routes cross one another, they have not developed any notable centers at the points of intersections. This emphasizes that the commercial traffic on them has been of local importance only, altho politically each of the states dominating them has been defending them tenaciously in order to control an exit and entrance for its commerce and levy on the thru traffic. On the other hand, the other states have been trying to achieve a control of these routes in order to become independent of the control exercised by the states dominating them. This explains a number of past invasions and wars and the questions irritating the Balkan states.

Historical Influences

Historically the past has left its indelible impression in the Balkans. A part, at least, of each major Balkan peoples have some time or another been under the domination of some other of these peoples, and the legacy of historical hatreds is traditional. Every aspect of the life of the people in the Balkans is profoundly affected by past wars and the fear of future conflicts. The long period of oppression and exploitation under the Turkish rule accounts for much of the backwardness of the region. But the various peoples have never ceased to be agitated by their great pasts. The modern Greek feels that he is the inheritor of the ancient greatness of Hellas; the Young Turks believed themselves to be the heirs of East Rome; the Serbians know that under Stephan Dushan they were the greatest Balkan people when the Turks arrived in Europe; and the Bulgarians advance the history of the Empire of Simeon and Samuel,

an empire which at that time rivalled the Byzantine, and just failed to take Constantinople; the Albanian is proud of the great men he gave to the Turks and reveres the memory of his national hero, Skanderbeg; the Rumanians always look down on their Balkan neighbors, convinced that they are the descendants of the Roman colonists, and remembering the days of Stephan the Great and Michael the Brave. The mutual injuries and the numerous shifts of the borderlines are not forgotten, and the presence of the numerous minorities within the borders of each of the Balkan states is just a fuel for the frequent fanning of such memories.

RELIGIOUS CONDITIONS

So far as religion is concerned, out of the varieties of religious mixtures stands out the dominance of the Greek Orthodox Faith. In every case of the Balkan states, the church has been identified with the rise of the Balkan states—with the present exception of the Turkey of today. The process of the liberation of the local Orthodox Churches from the control of the Byzantine patriarch at Istanbul and the founding of new self-governing national churches was identified with the national struggles of these states, and added further bitterness to the historical memories of the Balkan peoples. Today the church is employed (with the exception of Turkey) to further national interests and to oppose new progressive movements. It does very little in promoting a Balkan co-operation by the very fact that it supports fully the centrifugal tendencies of Balkan nationalism. The presence of numerous religious minorities in the Balkans is a disturbing factor. The emotionalism of particular religious creeds is a fruitful source of bitter conflicts.

THE EXTENT OF ILLITERACY

In the matter of education a high rate of illiteracy prevails thruout the Balkans (with the possible exception of Bulgaria). Illiteracy, as anywhere, has important social consequences. The high birth rate and death rate is just one phenomenon. Agricultural methods are primitive. The social outlook of the peasant is limited and he lacks the sense of social obligations. Under such conditions, the methods of production and consumption are traditional. Political authority rests upon the acquiescence of the masses, and fatalism is conducive to the acceptance of the status quo and to the imposition by other classes on the peasant. Localism and ignorance of large-scale public affairs are characteristic of illiterate populations, and

whatever interest in public affairs exists is mostly village politics. Illiteracy, furthermore, divides society into two segregate groups, and is conducive to the governing by a highly centralized authority, which is controlled by the other classes and by any group which is able to seize it. Dictatorships are possible and accepted. Hand in hand with it goes the predominance of authoritarian religions: Islam in Turkey and Greek Orthodox Christianity have prepared the way for the dictators. In such a society the members must look for their authority upwards by their very habits. Standards of living are distressingly low.

NATURAL RESOURCES

With the exception of Rumania and Yugoslavia, the natural resources are not particularly good and are undeveloped in any case. Altho the foundation of the wealth of the Balkan people is agriculture, the chief difficulty arises from the extreme variability of the rainfall. Occasionally come a few bad years when the rain is insufficient and then the unfortunate Balkan peasant falls into poverty. Many of the peasants, living in this region which is made up mostly of hills and mountain slopes, have turned to flocks and herds. But this has been conducive to lawlessness, and quarrels, characteristic of this kind of people. Additional factors have been constant fighting among the Balkan people themselves and the misrule of the Turks.

THE PEASANT CLASS

The whole region is predominantly agrarian. The majority of peasants own their own land. The industrial proletariat is weak, inconspicuous, and badly organized. There is no revolutionary ideology or tradition behind them. The organization of society is still basically that of individual peasant holdings. A middle class has grown up only in the last two generations, and still is very weak—altho it dominates politically. Altogether the social structure is very primitive. There was a great need for trained people after the liberation of the Balkans. But there is no demand now and the high school and college graduates become mostly political agents for political parties and seek government posts. Thus has grown up the enormous bureaucracy of the Balkan states. It feels that it is beneath its dignity to do menial labor. The members are convinced that it is their right to enjoy a life of leisure, or at least a position of comfort in the governmental employ.

THE NON-PEASANT CLASSES

This class is the most active proponent of Balkan nationalism. If we discard momentarily the elements of religion, language, and history, then the basis of Balkan nationalism is probably poverty: the leaders of each country are desperately tenacious of the frontiers of their country and jealous of their neighbors. As the state in the Balkans develops within its carefully guarded frontiers, the basic passion of the citizen of education becomes national, rather than social.

The member of the non-peasant classes of the Balkan Peninsula thinks differently than the average American. His states are still very young and did not have a very auspicious start. He led the revolutions against the Turkish oppressors and the revolutionary spirit is still within him. He belongs to emotional people whose emotionalism has been accentuated by the social *milieu* and by the systems of production. He lives with very little work, and the complex machinery of modern industrial life has not entwined him in a net and kept him hewing to the line. His schools only recently have introduced sports; his excess energies are burned up in the field he has come to be most interested in—politics, literature and art—but primarily politics. The whole system makes him emotional in politics and an individualist in the game of politics. Dealing with the illiterate masses, he has no belief in the ballot, altho he will praise very highly the theoretical democratic provisions of his constitution. There is shocking political corruption, because the externalities of representative government, alien to native tradition, were superimposed on conditions indigenous to the Balkan countries, which do not include a sense of public trusteeship. Besides, political corruption is the rule rather than the exception everywhere in the world. Furthermore, the middle class of the Balkans knows that the actual use of force has ushered in the governments of the liberated countries in that part of Europe, and an extreme revolutionary measure to get the control of the government is a very acceptable mode of political behavior for it.

THE CHARACTER OF BALKAN POLITICS

Thruout the Balkans great emphasis is set by politicians and others on Parliamentary institutions; and yet the fact remains that no single Balkan country has achieved a successful working of the fundamental basis of such institutions—the party system. Ru-

mania frequently stages an electoral parody which provides for the appointment of a Prime Minister, who may have no following at all in the electorate, but can obtain a substantial majority by "making" the election if he is appointed to the Premiership by the King. In Yugoslavia, the complete breakdown of the Parliamentary system after the troublesome years of trial led to the abolition of Parliament in 1929. The King of Yugoslavia, the late Alexander, had to impose a ban on the fierce political feuds, and his heavy hand provided another parody of Parliament, which really was nothing else but a sanctioning body for the measures decided upon by the King. In Albania the Parliament must respond readily to the wishes of the present King, who might not be a dictator in proclamation, but is a good one in practice. In Bulgaria there has also been shown the inaptitude for parliamentary institutions in the Balkans. It is true that, apart from the period when Stambuliski was in office and when Tsankoff was disposing of the followers of Stambuliski by violent means, the *Sobranye* there may have been regarded as having come nearer to the current relations of governmental majorities and opposition minorities than in any other Balkan parliament. But the corruption of politicians and the tendency of the military officers to dominate politics induced King Boris to inaugurate another dictatorship in the Balkans in the spring of 1935. Greece has been burdened with the gangster methods in politics, accompanied by formal accusations of political opponents. Before his revolution in 1935 Venizelos had to provide himself with a bullet-proof automobile. With this collapse of his revolt, numerous conspirators paid with their lives for their devotion to the cause of Venizelos. In Turkey, Kemal Pasha has learned that it is not wise to allow the excesses of rabid party politics, and has sidestepped such troubles by allowing the existence of only one political party, the members of which are tools in his hands.

All in all, the Balkan parliaments may be regarded as evidence of the breakdown of ordinary party politics, such as understood in Western Europe, and the unsuitability of such ordinary political processes to the conditions in the Balkans.

The army is still an integral part of society, and not a servant of society. The military traditions are strong, because the military means won the victories of independent statehood for each of the Balkan states. An army is still frequently used to bring in a political overthrow.

The centrum of social and political life, in spite of the prepon-

derance of the peasant, is the city. It is not at the village pump that the public opinion is formed, but in the *cafés*. Coffee-houses generally in the Balkans, in default of clubs, have hitherto constituted the chief centers of union and conversation for the middle and lower classes. They often serve as informal headquarters for political parties, and even for campaign meetings.

THE CHANGING MENTALITY

The effects of industrialization, however, which is slowly creeping into the Balkans, is now creating a new social mentality. Before the arrival of the new Turkey, the Balkans were, on the whole, under the domination of Turkey's favorite proverb, equivalent to "Haste is the devil's work." But the motto now becoming popular is "Time is money."

THE FUTURE SOCIAL CONFLICTS

Behind the geographical, ethical, linguistic, religious, cultural, traditional, political and other divisions there stands the peasant, the backbone of the nations of the Balkan Peninsula, the most active and the most conservative element of the state, the least prone to sudden changes and revolutionary madness. There is a wide gap between the masses of the peasants and the trickle of the middle classes. As a matter of fact, the members of the thin middle class of the Balkans live in a world quite removed from that of the peasant. Here is laid the foundation for the present and future struggles. For centuries the slaves of Byzantine mercenaries and Mussulman janissaries, these millions of peasants were politically valueless and helpless, and even today they do not have much to say in the government of the state. But they are now growing into a consciousness of human dignity. The introduction of agricultural machinery is a strong agency in the inception of political awakening, and today the delegates of the common people are fairly represented in the parliaments of these countries. They are often deluded by those who have the advantage of higher education, but they are learning their lessons with rapidity.

Fundamentally speaking, the Balkans have to face a process which is the moving force especially of Russia. Delayed in their economic and social development, these nations are now trying to reach as quickly as possible the standards set by the industrialized nations of the West and America. This process is painful and the political aspects of it produce manifestations which resemble the

well-known political methods of the western countries but take on their own special Balkan characteristics. The Balkans are only now emerging from the traditions of semi-feudalism and even the most enlightened of them have hardly emerged from the traditions of absolute monarchy. But a new affliction—"Western mindedness"—is one of the curious symptoms of the Balkans.

This is evidenced by the fact that no country is willing to admit that geographically it is situated in the Balkans. To suggest to the Rumanian that his Kingdom is in the Balkans is tactless. Yugoslavia considers itself as a central European power. Even Bulgaria, located in the center of the Balkans, likes to draw misleading geographical conclusions from the fact that during the war it was on the side of the Central Powers.

To make the step from the remains of medievalism into modernism is the task of the social leaders of the Balkans. The need for the speed is so great that the Balkan states have been or are since the World War under dictatorships or semi-dictatorships. Order and also a certain community of spirit are being drilled into the Balkan populations.

The Balkan Peninsula presents a fascinating study in social experiments which are in the greatest state of flux and kaleidoscopic changes.

THE MAJOR GEOGRAPHIC REGIONS OF EURASIA

GEORGE B. CRESSEY
Syracuse University

Is Eurasia one continent or two? Just how valid is the common practice of slicing the Soviet Union in two and assigning the parts to Europe and Asia? This huge landmass of Eurasia covers two-fifths of the face of the Earth above sea level, as big as any two continents put together, and contains four-fifths of the world's population.

The so-called continental boundary between Europe and Asia follows no significant division of topography, climate, soils, land use, culture, or history. It neither accords with the crest of the Urals or of any present political subdivision. This convention is a fiction of the map makers without geographic validity or the sanction of those whose country it divides.

But if the Soviet Union is continentally indivisible, is it to be classed as European or Asiatic? "Scratch a Russian and find a Tartar" reflects certain Mongoloid relations, but the Russians quite properly resent any exclusion from European classification, to which they are certainly related culturally. The Urals have been no more of a restraining influence on the historical development of Russia than the Appalachians with the United States, yet no one would draw a continental boundary thru Pennsylvania.

The fact is that the single continental mass of Eurasia has at least five major regions, not two. Several of these divisions are roughly as important economically or historically as some of the southern continents. One of these five areas is the Soviet Union, possibly including Afghanistan and Outer Mongolia. Another is the Far East with China, including "Manchoukuo," Farther Tibet and possibly Outer Mongolia, Japan, French Indo-China, and Siam. The third is India with Ceylon and possibly Afghanistan. The fourth major division is the Near East with Turkey, Syria, Palestine, Trans-Jordania, Iraq, and Iran (Persia). Arabia should probably be grouped with Africa. This leaves the Atlantic and Mediterranean peninsulas commonly known as Western Europe as the fifth area. With them may be grouped the northern fringe of Africa. To avoid confusion with the old usage of "Europe," and misconceptions concerning the relations of the Soviet Union, it might be better to find a distinctive name for this area of peninsular

Eurasia. To these five divisions might be added a sixth, the East Indies including British Malaya, Netherland India, the Philippines, and Sarawak.

In thus redesigning the regional geography of Eurasia, the question at once arises as to whether the major divisions should follow political boundaries or conform to geographic limits where appropriate consideration would be given to soil, land use, culture and similar features. In a continent without history and without pro-

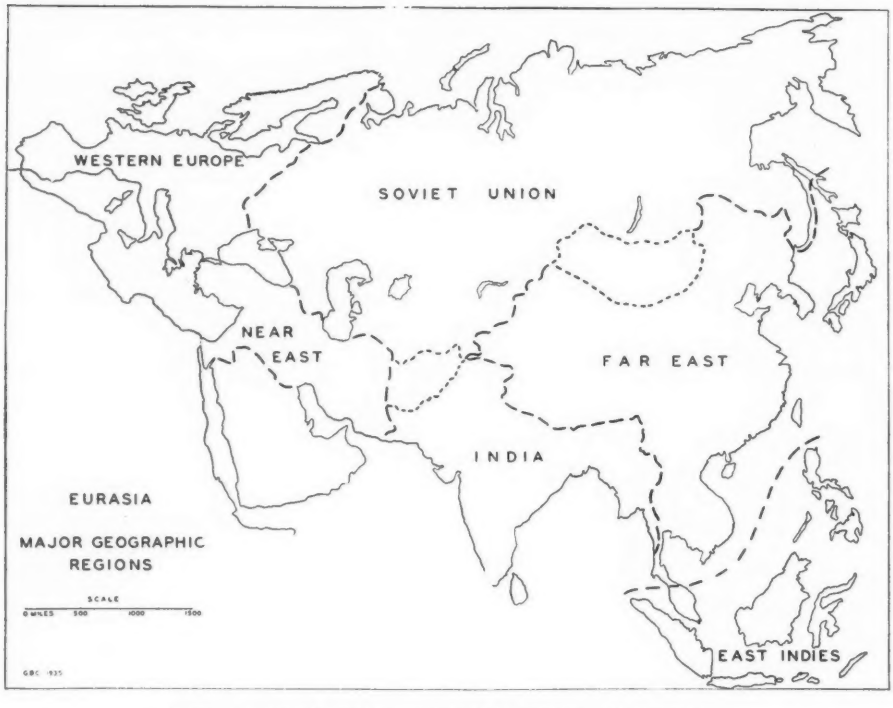

FIG. 1. The six major geographic regions of Eurasia.

found political contrasts, such might be the ideal. But Eurasia, the mother of the continents, is a land where the present is deeply rooted in the past. Long centuries of adjustment have pushed political boundaries into close conformity with natural boundaries, as in northern India, southern Turkestan, or western China. Furthermore, the physical structure of the continent has led to isolation and the growth of distinctive cultures. The Near East or the Far East are not merely names of convenience for political groupings, they represent at the same time fundamental geographic regions. All the factors of land forms, climatic desirability, soil characteristics,

and land use possibilities have been tested in the crucible of history, and the results of this stabilized adjustment are exhibited in these six major regions.

Few political boundaries are stable in detail. Minor changes have occurred even along the Himalayan frontier of India. Pre-War Russia included the states of the Baltic Corridor and Finland, but their basic cultural differences led them to break off as soon as the Revolution made it possible, so that the western limits of the

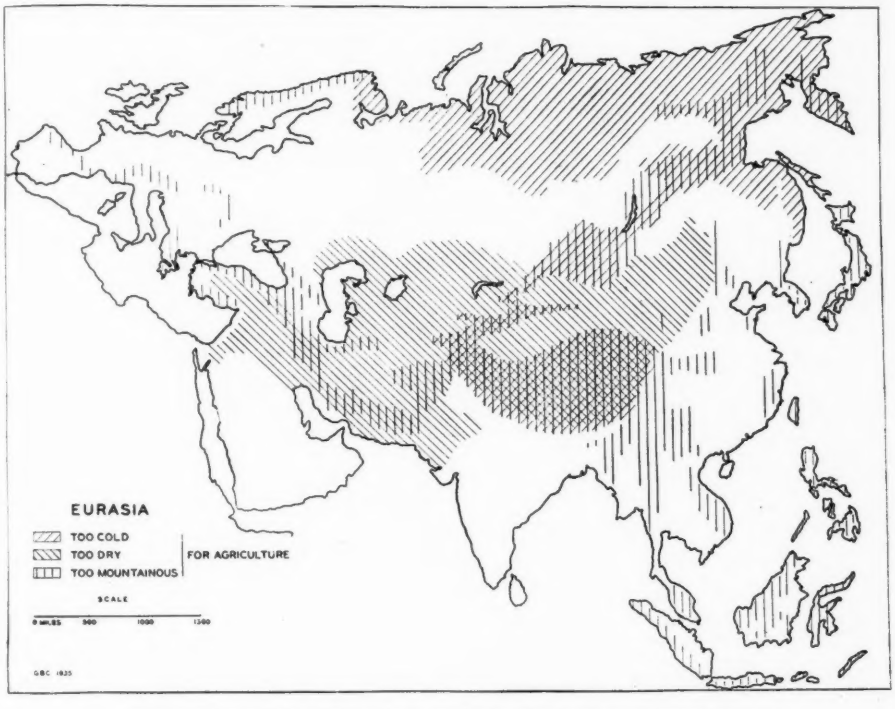

FIG. 2. Too much of Eurasia is undesirable for human occupance.

Soviet Union toward the Baltic have more cultural validity, tho perhaps less economic desirability, than before the War. The Gobi Desert is another marginal area. Culturally it is tied to China, but proximity to a more vigorous political area has for the present thrown the connections of Outer Mongolia with the Soviet Union. Afghanistan is fundamentally similar to portions of extra-peninsular India such as Baluchistan, but the easier passes to the north have permitted Soviet influence to penetrate more effectively than that of the British from the South.

Despite inevitable uncertainties as to boundary details, the cen-

tral characteristics of each of the six regions are distinctive. The Soviet Union is vast, new, and continentally minded; the Far East is mature and internally complex. India is monsoonal and a peninsula yet land locked; the Near East is handicapped by limited agricultural possibilities; while the East Indies are insular and tropical. Western Europe alone is world minded and rich in easily accessible mineral resources. Altho physically diverse, its relation to the ocean is unique, and in culture and history it clearly forms a unit. Russia's detachment from this western area is well shown by the incidental attention which it receives in all histories or geographies of Europe.

The topographic organization of Eurasia focuses in the Pamirs. From this roof of the world radiate the mountain chains which separate the four central divisions of the continent. Even far beyond this hub of the wheel, topographic boundaries have guided political limits, so that there is not a single navigable river which crosses from one area to another. Railway communications are equally limited. Not a single line connects India with the Near East, the Soviet Union, the Far East or the East Indies. One railway links the Far East to the Soviet Union. Only along the boundary between the Soviet Union and Western Europe is there appreciable overland commerce. Elsewhere trade between the various parts of the continent moves by ocean vessels. The populous lands of India and China are so isolated that the only export during thousands of years from the former to the latter was Buddhism, a commodity which moved with the lightest of baggage.

No geographic consideration of Eurasia is complete without recognition of the fact that most of this huge continent is unattractive for human occupance. Large sections of good agricultural land are utilized in the central portions of Western Europe, in the Soviet Union, in India, and in China, but they represent only a relatively small part of the entire area. In China, cultivated land amounts to but 11 per cent of the country, in the Union of Soviet Socialist Republics the figure is less than 5 per cent, in India the crop area is roughly 35 per cent, while for Western Europe arable land covers 29 per cent. These areas represent four-fifths of the continent and have a cultivation average of but 13 per cent. Too much of Eurasia is too cold, too dry, too mountainous, too sterile, or too remote to be attractive to man. Vast areas face the frozen Arctic, millions of square miles are beyond the reach of oceanic moisture, and the continent is the most mountainous of all.

On a strictly economic basis these contrasts in usability might

furnish a valid basis for regional division. Cold Eurasia comprises the tundra, most of the taiga or coniferous forests, and the high plateaus and mountain chains from the Himalayas and the Alps northward. Arid Eurasia includes the steppes and deserts of Mongolia, Turkestan, the Kirghiz Steppes, northwest India, and the Near East. This nomadic land reaches from within sight of the Mediterranean almost to the Pacific. Mountain Eurasia is irregular but extensive. It includes the Tibetan massif with its fringes in China and Afghanistan and its northward extensions in the Tien Shan and the Altai, the mountains of eastern Siberia, the mountain chains from Anatolia to the Sulaiman, and the Caucasus, Alps, Pyrenees, and Kjolen to the west. Few areas of tropical rain forest are present outside the East Indies so that there is little need for a group of lands too hot for use.

There remains Agricultural Eurasia, made up of many fragments. It is dominated by the world's largest plain reaching from France and England across Germany and Poland into the Soviet Union almost to Lake Baikal, where it is pinched by cold on the one hand and by aridity on the other. Delta plains in eastern China, and the Ganges—Indus lowland complete the list of more important regions of cultivation. Smaller areas are in the valleys of the Po, Danube, Tigris and Euphrates, Mekong, and Si, and in the islands of the East Indies. Since Agricultural Eurasia is widely scattered in latitude and relation to the ocean, crop possibilities differ widely.

These areas of agriculture are at the same time the centers of human activity. Were it not for the striking contrasts in history and culture, the geography of the continent might well be organized on such a utilitarian basis. Possibly a dual approach is needed, first thru these four physical types and then thru the six political and cultural regions originally described.

EDITORIAL NOTES AND NEWS

The specific training of the professional geographer is now being utilized in various land and water use planning projects sponsored by the Federal Government. Fourteen geographers and eight assistants are giving full time services in the Geography Section of the Division of Land Planning and Housing of the T.V.A. G. Donald Hudson is chief of this Section. Charles C. Colby is a consultant in this Section and has also worked on general problems in connection with recreational and other phases of land planning. Harlan H. Barrows on the Water Planning Committee of the National Resources Committee is assisting in a study covering all our waterways similar to the one recently completed on the Mississippi River. Helen M. Strong is also serving the National Resources Committee, her work being with the Committee on Regional Studies.

DR. C. F. MARBUT, who retired recently from the United States Bureau of Soils, died of pneumonia in Harbin, Manchukuo, on August 25. Illness overtook him on his way to China where he was to complete his Asiatic soil studies at the request of the Chinese government. Following the completion of his work in China, he planned to proceed to Rome and there prepare a soil map of the world for the International Institute of Agriculture. Dr. Marbut was the foremost authority on soils of the world, and also a man of sterling character, exemplifying the ideal scientific spirit and a kindly personality that was a constant inspiration to those who came to know him.

A limited number of fellowships and assistantships are administered under the international student exchanges of the Institute of International Education for American students for graduate study abroad. For further particulars write to the Institute of International Education, 2 West 45th Street, New York City, N.Y.

A new instrument known as the Shoal Water Fathometer, devised by the U. S. Coast and Geodetic Survey, can take twenty soundings a second in depths of six to 120 feet, measuring differences with an accuracy of about one inch. Other uses include the determination of the height of tides off shore, as well as the height of so called tidal waves following earthquakes.

Two floating landing ramps for amphibian seaplanes are being constructed in the Brooklyn Navy Yards. One will be moored in the East River at the foot of Wall Street, and the other in the same river at 31st Street, New York City. Each ramp will be 89 feet long and 56 feet wide. Provisions for turning the planes about for take-off is provided by a motor-driven turntable, the surface of which can be automatically raised or submerged.

The Bureau of Biological Survey reports the annual returns from game and fur resources to be about two billion dollars. The amount expended in the protection afforded to secure a yearly increase of fish, fur and game probably does not exceed two per cent of the yearly profits. Fur and game production is a feasible and practical side of forest and land conservation.

The United States is still the world's largest fur producer, St. Louis being one of the world's chief raw-fur collecting centers, especially noted for the seal skins from the Federal Government's Alaskan herds. Other leading North American collecting centers are Seattle, Winnipeg, Montreal, and Edmonton in contrast with world distributing centers like New York, London, and Leipzig. In the latter centers are concentrated the big receiving houses, the auctioneers, brokers, dealers, jobbers, buyers, manufacturers, retailers, designers, cutters, dyers, and other workers.

GEOGRAPHICAL PUBLICATIONS

Howard E. Wilson. **The Fusion of Social Studies in Junior High Schools.** 211 pp. Harvard Studies in Education, Vol. 21, 1933. Cambridge, Harvard University Press, 1933. $2.50.

Here is a study that is of inestimable value to the "cause" of geography. Having been written by an educator it is of far greater import than a similar study by a geographer, for Mr. Wilson cannot be accused of having "an axe to grind."

The purpose of the study, states the author, is twofold: "first, to determine as accurately and concretely as possible what the theory of fusion is; and second, to analyze the theory in order to estimate its value." The study is not statistical. It is an analysis of the idea of fusion in which the personal equation enters, it is true, but the subjective conclusions are scientifically arrived at, for they are based on an abundance of material, not Mr. Wilson's, and careful unbiased thinking. Dr. Wilson shows a thoro knowledge of both the recent texts in and the educational literature dealing with the social studies. He quotes at length from many scores of investigations.

His subject he treats in seven meaty chapters: "The Problem," "The Practice of Fusion," "The Theory of Fusion," "The Historical Background of the Fusion Controversy," "The Content of Fusion Curricula," "The Organization of Subject Matter," and "The Limited Usefulness of Fusion."

Mr. Wilson summarizes the principles underlying the fusion idea as follows:

1. Only such material as has direct value in developing in pupils intelligent understandings and tolerant, cooperative appreciations fitting them to engage in the activities of the life of their time shall be taught.

2. Selected subject matter in the social studies must be organized in units of experience, psychologically appealing and learnable, and corresponding as closely as possible to life situations.

3. Traditional subject boundaries should be ignored in the construction of the social-science curriculum; subject fields not only fail to achieve the purposes of education but interfere with the selection and organization of a curriculum which will achieve these purposes. The current problem rather than the subject fact is the heart of a functional unit.

The author's conclusions, after a thoro analysis of these principles—utilizing the findings of scores of investigations by American educators—are:

1. That the "traditional" subjects are no longer traditional, that while the fusionists have been making progress so have the subject matter specialists, and that the fusionists are attempting to reform conditions that no longer exist. "Subjects themselves have changed and developed in response to the same basal social forces and trends which are responsible for the fusion idea."

2. "Subject courses of progressive mold accept the theory of the child-centered school and its concomitant ideal of functionality as whole heartedly as fusion courses do. . . ." The activity program does not fuse.

3. In most of the fusion courses now being favored or followed in the past there is "no consistent point of view or underlying bond of union in the series of units, altho each unit is extensive in its scope." Fusion organization, which is a cross-sectioning of subject matter, frequently leads to the "creation of a series of units which do not integrate with one another. Subjects, rather than fusion, provide for the "synthesis of learnings which is the culmination of education."

4. The organization of teaching material into units is now practiced quite as much in subject curricula as in fusion curricula.

5. The traditional boundaries between subjects that seem to irritate the fusionists are of little significance with the better class of geography teachers (and so also with

teachers of the other social sciences) for these teachers pick facts wherever they find them. Facts from any field become geography's grist when correlated and synthesized under the discipline of geography. Geography is the only subject, however, as Lord Bryce long ago pointed out, that synthesizes the facts of the social and the natural environmental fields.

6. Basing a curriculum exclusively on the analyses of current life after all "leads to a static rather than to a dynamic existence." We must teach the learners a body of facts and principles and develop experiences that will function when they are adults, not just during their period of development. "A phase of subject units which would seem to add to their significance is the fact that they are not exclusively of a given time." The topics or units of study now uppermost in public attention may hold a minor place in world affairs a decade hence. Children should study those things that "give the greatest indication of relative permanence." . . . "Subject scholarships seem to be the best determinant of that relative permanence."

7. Current happenings are not shunned and neglected by present day geography teachers. The best teachers use the present situations or activities to develop interest, to motivate or activate, units dealing with the more permanent.

8. Fusion units do not have the advantage of subject units in learnability. "Learnability is dependent to a very large extent upon factors other than curriculum organization," such as, for example, teaching method, personality of the teacher, individual interests of children, etc.

Every live teacher of geography in a teachers college should possess this book.

Peabody College for Teachers A. E. PARKINS
Nashville, Tenn.

D. S. Robinson. **Political Ethics.** 306 pp. Thomas Crowell Co., New York. 1935. $2.00.

Teachers of geography are interested not only in the physical features of the chief countries, their output of commercial products, and the outward characteristics of the people, but also in the ideals of the leaders. This book is a sort of geography of the ideals of government and hence many teachers of geography will find its discussions of Russia, Germany, Italy, Great Britain of help in understanding these nations.

Indiana University STEPHEN S. VISHER